



SAFETY HEALTH AND
ENVIRONMENTAL AFFAIRS

MAY 06 1993

ORIGINAL

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 7346 MICROBIOCIDES

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 7346 MICROBIOCIDES

DESCRIPTION: A blend of halogenated substituted hydantoins

NFPA 704M/HMIS RATING: 3/3 HEALTH 1/1 FLAMMABILITY 1/1 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
1-Bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	40-70
1,3-Dichloro-5,5-dimethylhydantoin	118-52-5	20-40
1,3-Dichloro-5-ethyl-5-methylhydantoin	89415-87-2	10-20

SECTION 3 PRECAUTIONARY LABEL INFORMATION

DANGER: Harmful if swallowed. Highly corrosive. Causes eye and skin damage. Irritating to nose and throat. Avoid breathing dust. Use with adequate ventilation. Do not get into eyes, on skin or clothing. Wear rubber gloves, chemical goggles and face shield when handling. Wash thoroughly after handling. Immediately remove contaminated clothing and wash before reuse.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Flush eyes immediately with plenty of water for at least 15 minutes. Call a physician at once.

SKIN: Immediately wipe away excess material with a dry cloth while removing contaminated clothing and shoes. Under a safety shower, wash affected areas thoroughly with large amounts of water and soap if available, for at least 15 minutes. Get immediate medical attention. Discard or decontaminate clothing and shoes.

INGESTION: Immediately give several glasses of water. DO NOT induce vomiting. If vomiting occurs, give fluids again. Have physician determine if patient's condition allows induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or

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SECTION 4 FIRST AID INFORMATION

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convulsing person. Get immediate medical attention.

INHALATION: Remove from area to fresh air. If not breathing, clear airway and start mouth-to-mouth artificial respiration or use a bag-mask respirator. Get immediate medical attention. If victim is having trouble breathing, transport to medical care and, if available, give supplemental oxygen.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition. Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Can cause severe irritation. Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.

SKIN CONTACT: Can cause severe irritation. Corrosive to the skin with possible permanent damage depending on the length of exposure and on the first aid action given. Can cause allergic contact dermatitis in susceptible individuals.

INHALATION: Can cause severe respiratory irritation. Can be corrosive to the mucous membranes and the lungs. Can cause an allergic reaction in susceptible individuals.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have been conducted on this product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 468 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS): Corrosive

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS): Corrosive



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SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: White	FORM: Briquettes	ODOR: Pungent
pH (1% solution) =	3.6	ASTM E-70
SPECIFIC GRAVITY:	Less than 1.0 @ 77 Degrees F	ASTM D-1298
MELTING POINT:	248 - 298 Degrees C	ASTM D-2117
FLASH POINT:	329 Degrees F (PMCC)	ASTM D-93
EVAPORATION RATE (Ether = 1):	Less than 1	ASTM D1901
PERCENT VOLATILE BY VOLUME:	Less than 0.5	

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: 329 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material. Wear self-contained respiratory equipment.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid oxidizable mixture, hydrates and water. Chemical hazard strong oxidizing agent. Avoid contact of neat product with organic materials. Mix only with water in an approved feeding container. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter, or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases and possible generation of fire and explosion. In case of contamination or decomposition, do not reseal container. If possible isolate container in open air or well ventilated area. Flood with large volumes of water if necessary.

STORAGE: Avoid high temperatures, direct sunlight and moisture.

THERMAL DECOMPOSITION PRODUCTS: At temperatures above 329 Degrees F decomposes releasing unidentified gases.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: Respiratory protection not normally needed. If

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SECTION 10 PERSONAL PROTECTION EQUIPMENT

(CONTINUED)

significant dusting occurs, wear either a disposable dust mask or a cartridge respirator with prefilter or high efficiency cartridge.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: If significant dusting occurs, local exhaust ventilation is recommended.

PROTECTIVE EQUIPMENT: Wear impermeable gloves, boots, aprons or a slicker suit to avoid skin contact. Chemical goggles and face shield are also recommended.

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

SPILL CONTROL AND RECOVERY:

Solid spills: Sweep or vacuum up and reclaim into recovery or salvage drums for disposal. Wear the protective equipment specified in Section 10. Refer to CERCLA in Section 14.

This product is toxic to fish. It should not be directly discharged into lakes, ponds, streams, waterways or public water supplies.

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D001.

As a hazardous solid waste, it must be disposed of in a licensed Hazardous Waste Treatment, Storage and Disposal facility in accordance with local, state, and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

This product is toxic to fish. Do not discharge into lakes, streams, ponds or public water unless in accordance with NPDES permit. For guidance contact your



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SECTION 12 ENVIRONMENTAL INFORMATION

(CONTINUED)

Regional Office of the EPA. Do not contaminate water by cleaning of container and equipment or disposal of wastes. Apply this product only as specified on this label.

AQUATIC DATA: Results below are based on the product.

96 hour static acute LC50 to Bluegill Sunfish = 1.2 ppm
96 hour static acute LC50 to Fathead Minnow = 0.71 ppm
96 hour static acute LC50 to Rainbow Trout = 0.5 ppm
48 hour static acute LC50 to Daphnia = 0.4 ppm
48 hour static acute LC50 to Ceriodaphnia dubia = 0.15 ppm
96 hour static acute LC50 to Sheepshead Minnow = 1.6 ppm
96 hour static acute LC50 to Mysid Shrimp = 1.1 ppm
96 hour static acute LC50 to Eastern Oyster = 0.98 ppm

AQUATIC DATA: Results below are based on dehalogenated product (5,5-dimethylhydantoin)

96 hour static acute LC50 to Rainbow Trout = 6,100 mg/L
48 hour static acute LC50 to Daphnia = 1,300 mg/L
96 hour static acute LC50 to Fathead Minnow = 8,100 mg/L
96 hour static acute LC50 to Sheepshead Minnow = 13,300 mg/L
96 hour static acute LC50 to Grass Shrimp = 12,000 mg/L
96 hour static acute LC50 to American Oyster = 14,200 mg/L

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - OXIDIZING MATERIAL, N.O.S.
OXIDIZER UN 1479

CONTAINS

- 1-BROMO-3-CHLORO-5,5-DI-METHYLHYDANTOIN, 1,3-DICHLORO-5,5-DI-METHYLHYDANTOIN

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredients in this product are



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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

hazardous and the reasons are shown below.

Hydantoins - Corrosive, oxidizer

1,3-Dichloro-5,5-Dimethylhydantoin = TWA 0.2 mg/m³, STEL 0.4 mg/m³
ACGIH/TLV

1,3-Dichloro-5,5-Dimethylhydantoin = TWA 0.2 mg/m³, STEL 0.4 mg/m³
OSHA/PEL

1-Bromo-3-chloro-5,5-dimethyl hydantoin = 0.2 mg/m³
Manufacturer's recommendation

1,3-Dichloro-5-ethyl-5-methyl hydantoin = 0.2 mg/m³
Manufacturer's recommendation

CERCLA/SUPERFUND, 40 CFR 117, 302:
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
This product does not contain ingredients listed in Appendix A and B as an
Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):
Our hazard evaluation has found this product to be hazardous. The product
should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard
-- Delayed (chronic) health hazard
XX Fire hazard
-- Sudden release of pressure hazard
-- Reactive hazard

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
This product is exempted under TSCA and regulated under FIFRA. The
inerts are on the Inventory List.

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA):



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SECTION 14 REGULATORY INFORMATION

(CONTINUED)

EPA Reg. No. 38906-12-1706. This product is registered for use as a microorganism control chemical used in industrial recirculating and once-through cooling water tower systems and when used in air washer systems. In all cases follow instructions on the product label.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 11 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/
formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments):
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

This product is a registered biocide and is exempt from State Right to Know Labeling Laws.

INTERNATIONAL REGULATIONS:

This product is a registered biocide and is exempt from WHMIS under The House of Commons of Canada Bill C-70.

SECTION 15 ADDITIONAL INFORMATION

Nalco internal number LON042291

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access



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SECTION 16 USER'S RESPONSIBILITY

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to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

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